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William F. Ford Jr.

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FUNDAMENTALLY DIFFERENT FACTOR VARIANCES UNDER THE CLEAN WATER ACT: SHOULD THEY BE APPLICABLE TO TOXIC POLLUTANTS?

I. INTRODUCTION

The Clean Water Act (Act)¹ imposes strict and at times prohibitively expensive controls on the discharge of pollutants by industrial sources in order to protect and upgrade the quality of our nation's waterways.² The goal of the Act is the elimination of the "disease" of water pollution, which harms the environment and which, "like any other disease, . . . can kill us."³

Because of the harmful effects of pollution and the tremendous cost of pollution control, the accurate prediction of the pollution control standards applicable to individual dischargers is essential from the standpoint of industrial planning and environmental protection.⁴ While dischargers of pollu-

1. 33 U.S.C. §§ 1251-1376 (1982).

2. See 33 U.S.C. § 1251(a) (1982) (setting forth the goals of the Clean Water Act). For a discussion of the substantive requirements of the Act, see notes 28-55 and accompanying text *infra*. For a discussion of the policy sections of the Act, see note 28 and accompanying text *infra*. Congress foresaw that the standards imposed by the Act would not be within the economic capability of some industries. See SENATE COMM. ON PUB. WORKS, 93D CONG., 1ST SESS., A LEGISLATIVE HISTORY OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 1282 (Comm. Print 1973) [hereinafter cited as LEGISLATIVE HISTORY 1972] (statement of Sen. Bentsen). As Senator Bentsen stated, "There is no doubt that we will suffer some disruptions in our economy because of our efforts [to clean the nation's waterways]; many marginal plants may be forced to close." *Id.* In addition, the EPA, Commerce Department and Council on Environmental Quality estimated that there would be 200 to 300 plant closings caused by the imposition of the lowest level of pollution control in the Act. *EPA v. National Crushed Stone Ass'n*, 449 U.S. 64, 80 (1980). For a discussion of *National Crushed Stone*, see notes 82-83 & 85-89 and accompanying text *infra*.

3. LEGISLATIVE HISTORY 1972, *supra* note 2, at 161 (statement of Sen. Muskie, Chairman of the Subcommittee on Air and Water Pollution).

4. See 33 U.S.C. § 1251 (1982) (noting the goals of environmental protection and research to develop pollution control technology). Without some degree of certainty as to the standards applicable to an individual discharger, the discharger cannot prepare for the cost of compliance and scientists cannot even attempt to predict the level of pollution which will be achieved and its effect on the environment. See Cairns, *Regulating Hazardous Chemicals in Aquatic Environments*, 11 B. C. ENV. AFF. L. REV. 1, 2, 5 (1983) (discussing the problems in prediction of the effect of toxic chemicals).

The Clean Water Act authorizes the Administrator of the Environmental Protection Agency (Administrator of EPA or Administrator) to impose national technology based effluent standards on classes and categories of pollutants. See *E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112 (1977) (the Administrator can promulgate single number limits). For a more thorough discussion of technology based effluent limitations, see notes 33-49 and accompanying text *infra*. The Act's regulatory scheme authorizes the Administrator to impose technology-based effluent limitations on "conventional" pollutants of increasing exactitude. See 33 U.S.C. § 1311(b)(1)(A), (b)(2)(A) (1982) (best practicable control technology (BPT) based effluent limitations). For a discussion of the regulation of conventional pollutants, see notes 28-46

tants are generally regulated according to the class or category to which they belong,⁵ in limited circumstances the Act expressly provides for individualized levels of control which are invariably more lenient and less expensive than those regulating the category.⁶ Alternatively, a discharging source may apply for a Fundamentally Different Factor (FDF) variance, an administratively-created device which accommodates noncompliance with categorical discharge limitations by substituting an individualized level of control.⁷

FDF variances may dramatically affect the enforcement of standardized levels of pollution control because they are potentially applicable to all effluent limitations under the Act.⁸ Recently, the Third Circuit, in *National Asso-*

and accompanying text *infra*. The Administrator is also authorized to impose special effluent limitations and prohibitions on toxic pollutants. See 33 U.S.C. § 1317(a)(2) (1982) (best available control technology (BAT) based effluent limitations). For a discussion of the regulations of toxic pollutants, see notes 47-49 and accompanying text *infra*. The Administrator may issue regulations for the pretreatment of effluents destined for publicly owned treatment works (POTWs). See 33 U.S.C. § 1317(b)(1) (1982) (regulation of pollutants which will interfere with or pass through POTWs). For a discussion of pretreatment regulation see notes 43-44 and accompanying text *infra*. Finally, the Administrator may impose effluent limitations for new sources in designated categories of polluters. See 33 U.S.C. § 1316 (1982) (best available demonstrated control technology (BADCT) based effluent limitations). For a discussion of the regulation of new sources, see notes 45-46 and accompanying text *infra*.

5. See 33 U.S.C. § 1311(b)(2)(A) (1982) (regulation of "category or class" of dischargers). For an example of class or category of polluters, see 40 C.F.R. § 408.420 (1983) (canned and preserved seafood processing point source category, mechanized clam processing subcategory). For a discussion of classes and categories of dischargers, as well as examples of the way classes and categories are established, see note 50 and accompanying text *infra*.

6. See, e.g., 33 U.S.C. § 1311(c) (1982) (economic variances); *id.* § 1311(g) (environmental variances). A source may be entitled to an economic variance when it can show it is using the maximum technology it is economically capable of, and that this will result in progress toward the elimination of pollutants. See 33 U.S.C. § 1311(c) (1982). For a discussion of economic variances from categorical standards, see notes 63-67 and accompanying text *infra*. A source may be entitled to a § 301(g) environmental variance if it meets requirements relating to water quality standards and goals. See 33 U.S.C. § 1311(g) (1982). Both § 301(c) and § 301(g) variances relate only to BAT standards. For a discussion of BAT, see note 37 and accompanying text *infra*. For a discussion of environmental variances from categorical standards, see notes 68-71 and accompanying text *infra*.

7. See 40 C.F.R. § 125.30 (1983) (outlining the purpose and scope of FDF variances). Fundamentally different factor variance provisions are not contained in the Act itself but were promulgated by the Environmental Protection Agency pursuant to delegated authority. See 33 U.S.C. § 1361 (1982) (authorizing Administrator "to prescribe such regulations as are necessary to carry out his functions"). For a discussion of FDF variances, see notes 76-116 and accompanying text *infra*.

8. 40 C.F.R. § 125.30(a) (1983). At the present time FDF variance regulations provide that they apply to "all national [pollutant discharge] limitations promulgated under Sections 301 and 304 of the Act," with one minor exception. 40 C.F.R. § 125.30(a) (1983). See R. ZENER, GUIDE TO FEDERAL ENVIRONMENTAL LAW 67 (1981) (FDF variances under present regulations apply to technology-based limitations on direct dischargers as well as pretreatment standards). For a discussion of technology-based limitations and pretreatment standards imposed by the Act, see notes 28-46 and accompanying text *infra*. For a discussion of a recent Third Circuit

ciation of Metal Finishers v. EPA,⁹ and the Fourth Circuit, in *Appalachian Power Co. v. Train*,¹⁰ have disagreed as to whether allowing FDF variances for toxic pollutants is inconsistent with the Clean Water Act's stringent regulation of toxics.¹¹ The Supreme Court has agreed to address this issue¹² at the same time that Congress is considering a proposed amendment to the Act which would expressly authorize FDF variances for toxic pollutants.¹³ It is hoped that understanding the foundation and operation of FDF variances will encourage informed decision making regarding the desirability of FDF variances for toxic pollutants. On a broader scope, understanding the FDF variance provision should foster a better understanding of the specific technology-based limitations employed to control water pollution.¹⁴

This note will provide a preliminary overview of The Clean Water Act in an attempt to explain the FDF variance in relation to the Act's overall structure, including the variances expressly authorized by Congress.¹⁵ Against that background, the competing considerations concerning FDF

opinion disallowing FDF variances from pretreatment standards, see notes 102-10 and accompanying text *infra*.

The Supreme Court has stated that variances are not applicable to effluent limitations for new sources. See *E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 138 (1977) (Congress intended the new source standards "to be absolute prohibitions"). For a discussion of these standards, see notes 45-46 and accompanying text *infra*. For further discussion of the Supreme Court's decision in *Du Pont*, see notes 80-81 and accompanying text *infra*.

9. 719 F.2d 624 (3d Cir. 1983), *cert. granted sub nom.* Chemical Mfrs. Ass'n. v. Natural Resources Defense Council, Inc., 104 S. Ct. 2167 (1984).

10. *Appalachian Power Co. v. Train*, 620 F.2d 1040 (4th Cir. 1980) (*Appalachian II*).

11. See *Metal Finishers*, 719 F.2d at 645-46 (§ 301(l) of the Act should be interpreted as prohibiting FDF variances for toxic pollutants). But see *Appalachian II*, 620 F.2d at 1047-48 (§ 301(l) prohibition against variances for toxic pollutants did not prohibit an FDF variance). For a discussion of *Metal Finishers* and *Appalachian II*, see notes 93-108 and accompanying text *infra*.

12. *National Ass'n. of Metal Finishers v. EPA*, 719 F.2d 624 (3d Cir. 1983), *cert. granted sub nom.* Chemical Mfrs. Ass'n. v. Natural Resources Defense Council, Inc., 104 S. Ct. 2167 (1984) (raising the issue whether § 301(l) of the Act precludes fundamentally different factor variances for toxic pollutants).

13. See [Current Developments] ENV'T REP. (BNA) 1307, 1307 (Nov. 18, 1983). This amendment was proposed by EPA Administrator Ruckelshaus on November 15, 1983. *Id.* For the text of the proposed amendment which would allow FDF variances for toxic pollutants, see note 111 *infra*. For a discussion of Administrator Ruckelshaus' arguments in favor of this amendment, see notes 112-13 *infra*.

14. An understanding of FDF variances will further an understanding of the specific technology-based limitations because FDF variances are, in effect, individualized technology-based limitations for specific plants. See *EPA v. National Crushed Stone Ass'n.*, 479 U.S. 64, 79 n.18 (1980) (deferring to EPA's interpretation of FDF variances as an individualized definition of a technology-based limitation). For a general discussion of FDF variances, see notes 76-89 and accompanying text *infra*.

15. For a discussion of the basic structures of the Act, see notes 28-75 and accompanying text *infra*. For a discussion of economic variances from categorical standards, see notes 63-67 and accompanying text *infra*. For a discussion of environmental variances from categorical standards, see notes 68-71 and accompanying text *infra*.

variances in the context of toxic pollutants will be explored,¹⁶ leading to the suggestion that no variances be allowed for toxic pollutant discharges.

II. FEDERAL WATER POLLUTION CONTROL

A. *Background and Scheme of the Federal Water Pollution Control Act*

Prior to 1972, the Federal Water Pollution Control Act (FWPCA)¹⁷ was founded upon a set of water quality standards, which defined maximum acceptable levels of pollution in navigable waters.¹⁸ In enforcement actions the government was required to show that a given area's unacceptable water quality was caused by a specific individual discharge of pollutants.¹⁹ Because it required the government to cross this "virtually unbridgeable causal gap,"²⁰ the water quality standards approach to pollution control was ineffective.²¹

In 1972 Congress amended the FWPCA in an effort to avoid previously experienced enforcement obstacles and to quiet rising public concern about

16. For a discussion of the competing arguments for and against FDF variances for toxics, see notes 117-42 and accompanying text *infra*.

17. Federal Water Pollution Control Act, Pub. L. No. 92-500, § 2, 86 Stat. 816-96 (1976), (codified as amended at 33 U.S.C. §§ 1251-1376 (1982)). The "Federal Water Pollution Control Act" was the title of the federal legislation on water pollution prevention and control before 1977. *See id.* Official Comment § 1. The 1977 Amendments changed the Act's name to the "Clean Water Act." *See* 33 U.S.C. § 1251 Official Comments (1982).

18. *See* Water Quality Act of 1965, Pub. L. 89-234, § 5(a), 79 Stat. 903, 907, 910 (1965) (procedure for establishing water quality standards in the FWPCA prior to 1972) (current version at 33 U.S.C. §§ 1313-1313(a) (1982) (using approximately the same system to set standards)). According to Rodgers, "[a] water quality standard is a legal expression of the amount of pollutants allowed in a defined watercourse," such as those contained in § 303 of the present Act, which are set to meet the Act's goal of "fishable," "swimmable" waters. W. RODGERS, HANDBOOK ON ENVIRONMENTAL LAW 356 (1977). *See* 33 U.S.C. § 1313 (1982) (setting forth the Act's water quality standards). For the text of the section defining the Act's goals, see note 28 *infra*. Effluent standards, on the other hand, describe "the amount of pollutants that can be released legally by a specific source," such as the technology-based effluent limitations contained in § 301. W. RODGERS, *supra*, at 356. *See* 33 U.S.C. § 1311 (1982) (setting forth the Act's technology-based effluent limitations).

19. *See* Water Quality Act of 1965, Pub. L. 89-234 § 5(a), 79 Stat. 903, 907, 910 (1965) (penalty may be imposed against the dischargers responsible for reducing the water quality below the standards) (current version at 33 U.S.C. § 1312 (1982)). *See also* Note, *Effective National Regulation of Point Sources Under the 1972 Federal Water Pollution Control Act: The Double Burden of Legislative Draftsmanship and Judicial Review*, 10 GA. L. REV. 983, 986 (1976) (discussing the difficult causal requirements in the Act prior to 1972).

20. *CPC Int'l, Inc. v. Train*, 515 F.2d 1032, 1035 (8th Cir. 1975) (describing the difficult "unwieldy" enforcement under the FWPCA prior to 1972), *cert. denied*, 430 U.S. 966 (1977).

21. *See id.* The burden of proof in enforcement actions was so formidable that prior to 1971 "only one case had reached the courts in more than two decades." *Id.* (citing LEGISLATIVE HISTORY 1972, *supra* note 2, at 1423 (describing an "almost total lack of enforcement" under the Act prior to 1972)). *See also* Note, *supra* note 19, at 984-86 (discussing other problems with the original FWPCA).

environmental protection.²² The 1972 amendments adopted a new approach using technology-based effluent limitations to be enforced through a mandatory permit program.²³ These amendments established the basic framework of the present FWPCA, or the "Clean Water Act,"²⁴ which provides that "the discharge of any pollutant by any person shall be unlawful"²⁵ except in compliance with the Act's effluent limitations²⁶ and permit requirements.²⁷

B. *Technology Based Effluent Limitations*

The 1972 amendments to the FWPCA contemplated the phased reduction of pollution discharge through the permit system and established "the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985."²⁸ Under the Act, the EPA Administrator is required to

22. Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, § 2, 86 Stat. 816-96 (1972) (codified as amended at 33 U.S.C. §§ 1251-1376 (1982)). See *American Petroleum Inst. v. EPA*, 540 F.2d 1023, 1027 (10th Cir. 1976), cert. denied, 430 U.S. 922 (1977). The "[p]opular demand for legislative action to control water pollution" was reflected in the fact that only 12 senators and 23 representatives concurred in President Nixon's veto of the 1972 amendments to the FWPCA. *Id.* For a brief and descriptive comparison of the quality of water bodies in the United States in their pristine, historical state versus the polluted conditions of the mid-1960s, see Comment, *Judicial Maelstrom in Federal Waters: A Composite Interpretation of the Federal Water Pollution Control Act Amendments of 1972*, 45 FORDHAM L. REV. 625, 625 (1976).

23. See 33 U.S.C. § 1311 (1982) (setting out various technology-based standards to be applied to particular dischargers or pollutants).

In addition to technology-based effluent limitations, water quality based effluent limitations may still be imposed upon a particular point source. See 33 U.S.C. § 1312 (1982). These water quality based effluent limitations may be imposed by state law, federal laws other than the Clean Water Act, or through § 302 of the Clean Water Act. See, e.g., PA. STAT. ANN. tit. 35, §§ 691.1-760.2 (Purdon 1977 & Supp. 1983) (state limitations); 42 U.S.C. §§ 300(f) to 300(j)-10 (1982) (Safe Drinking Water Act). States are authorized under § 510 to impose their own limitations on a source provided they are more stringent than the federal limits. 33 U.S.C. § 1370 (1982). Section 303 directs them to adopt water quality standards, i.e. use designations and procedures for maintaining them. See 33 U.S.C. § 1313 (1982). The EPA may itself impose water quality based effluent limitations pursuant to section 302 subject to a cost/benefit analysis. See 33 U.S.C. § 1312 (1982).

24. The Federal Water Pollution Control Act officially received its short title, the "Clean Water Act," in the 1977 amendments. 33 U.S.C. § 1251 comments (1982).

25. 33 U.S.C. § 1311 (1982).

26. For a discussion of the different types of effluent limitations set under the Act, see notes 28-51 and accompanying text *infra*.

27. For a discussion of the sections of the Act dealing with permit requirements, see note 32 and accompanying text *infra*.

28. 33 U.S.C. § 1251(a)(1) (1982). This goal "has been severely criticized as potentially involving the nation in expenditures which are vastly excessive and unwarranted." F. GRAD, TREATISE ON ENVIRONMENTAL LAW § 3.03[2][a], at 3-102 (1983). On the other hand, Senator Edmund Muskie, the primary proponent of the legislation, described the declaration of goals and policy as "not merely the pious declarations that Congress so often makes in passing its laws; on the contrary, this is literally a life or death proposition for the Nation." LEGISLATIVE HISTORY 1972,

promulgate effluent limitations²⁹ of increasing stringency in anticipation of technological advances³⁰ for different categories of point sources.³¹ These

supra note 2, at 164. The full text of § 101(a) states the Act's policies and goals as follows:

(a) The objective of this chapter is to restore and maintain the chemical, physical and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this chapter—

(1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;

(2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;

(3) it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited;

(4) it is the national policy that Federal financial assistance be provided to construct publicly owned waste treatment works;

(5) it is the national policy that areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each State; and

(6) it is the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone, and the oceans.

33 U.S.C. § 1251(a) (1982).

29. 33 U.S.C. § 1311(b)(1)(A), (b)(1)(B), (b)(2)(A), (b)(2)(E) (1982) (effluent limitations for the technology based standards applicable to various types of dischargers shall be defined pursuant to or in compliance with regulations issued by the Administrator pursuant to a specific subsection of § 304). The Act actually only specifically authorizes the Administrator to promulgate the § 304 "guidelines" upon which the § 301 effluent limitations are to be based. *See* 33 U.S.C. § 1311 (1982) (stating in the passive voice that § 301 limitations shall be established). *See also* American Petroleum Inst. v. EPA, 540 F.2d 1023, 1030 (10th Cir. 1976) (stating earlier position of some circuits that the permitting authority would set the final limits). The Supreme Court, in *Du Pont*, held that the Administrator has the power to set § 301 limitations. *E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 128-29 (1977). For further discussion of the Administrator's power to promulgate § 301 limitations, see note 35 and accompanying text *infra*.

Because the Act set strict deadlines and raised complicated, technical questions regarding the setting of effluent limitations, the Administrator originally promulgated the § 304 guidelines at the same time he promulgated the § 301 effluent limitation. *Du Pont*, 430 U.S. at 122 (the limitations may be promulgated by the Administrator simultaneously).

30. *See* 33 U.S.C. § 1314(b)(1)(B), (b)(2)(B), (b)(4)(B), (c), (d), (g) (1982). These § 304 guidelines are used by the Administrator in setting the technology-based effluent limitations, the least stringent of which is Best Practicable Technology (BPT), and the most stringent of which is Best Available Demonstrated Control Technology (BADCT). *Id.* § 311(b)(1)(A) (BPT); *id.* § 1316(a)(1) (BADCT). *See* F. GRAD, *supra* note 28, § 3.03[4][e], at 3-152 to -156 (BAT is the most stringent standard for existing direct dischargers). One commentator has explained that "[t]he purpose of the effluent limitation guidelines is to identify the degree of effluent reduction attainable through application of each technology standard and to specify factors to be taken into account in determining control measures and practices to be applicable to point sources." La Pierre, *Technology-Forcing and Federal Environmental Protection Statutes*, 62 IOWA L. REV. 771, 809-10 (1977) (footnotes omitted). For a discussion of the Admin-

limitations are applied to dischargers through the National Pollutant Discharge Elimination System's (NPDES) permit procedure.³² The schedule of water pollution control contemplated by the enforcement of effluent limitations can be briefly summarized as follows:

(1) *Existing Direct Dischargers*³³

Section 301 of the FWPCA directs the Administrator to promulgate effluent limitations for all existing point sources of water pollution.³⁴ These limitations required direct dischargers to implement the "best practicable control technology currently available" (BPT) by July 1, 1977.³⁵ Limita-

istrator's power to apply the guidelines and set the effluent limitations, see note 35 *infra*.

31. See 33 U.S.C. § 1311(b)(2)(A) (1982) (regulation of categories and classes of sources of conventional pollutants); *id.* § 1316(b)(1)(A) (setting out a list of new source categories for regulation); *id.* § 1317(a)(2) (regulation of classes and categories of sources discharging toxic pollutants). For some examples of subcategorization, see EPA Effluent Limitations Guidelines, 40 C.F.R. §§ 408.10-336 (1983) (canned and preserved seafood processing point source category with 31 subcategories).

32. 33 U.S.C. § 1342 (1982). A source must obtain an NPDES permit to discharge pollutants. *Id.* § 1311(a) (any discharge of pollutants not in compliance with a permit's effluent limitations is unlawful). See W. RODGERS, *supra* note 16, at 452 (the basic premise of the 1972 amendments is that discharge of pollutants is unlawful unless it is conducted in compliance with the NPDES system). NPDES permits can be granted either by the EPA or by a state with an approved permit program. See 33 U.S.C. § 1342(a) (1982) (EPA granted permits); *id.* § 1342(b) (state granted permits). Even if a state does not have an approved permit program, a discharger must normally get a certification from the state in which it discharges in order to get a federal NPDES permit. *Id.* § 1341. The EPA retains the power to "veto" any state-granted permit which will not put the source in compliance with the terms of the Act. *Id.* § 1342(d)(2) (if the state does not submit an acceptable permit to the Administrator within 30 days of notification of a veto, the Administrator may issue a Federal permit for the source).

33. See 33 U.S.C. § 1311 (1982). The industrial dischargers and publicly owned treatment works (POTW's) regulated under § 301 are by definition "direct" dischargers: they discharge their effluent directly into a watercourse, rather than into a POTW. See *Metal Finishers*, 719 F.2d at 633 (distinguishing direct from indirect dischargers).

34. 33 U.S.C. § 1311(b)(1)(A) (1982). Section 301(b)(1)(A) deals with "effluent limitations for point sources other than publicly owned treatment works." *Id.* New dischargers are regulated separately under § 306. See *id.* § 1316. For further discussion of the regulation of new sources, see notes 45-46 and accompanying text *infra*.

35. 33 U.S.C. § 1311(b)(1)(A) (1982). In promulgating the guidelines to be used in determining BPT for a particular point source, the Administrator must include the factors set out in § 304(b)(1)(B):

Factors relating to the assessment of best practicable control technology currently available . . . shall include consideration of the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, and shall also take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate. . . .

Id. § 1314(b)(1)(B). BPT standards are "based upon the average of the best existing

tions based on BPT, the least demanding standard under the Act, were intended to be imposed for an interim period only.³⁶

The second stage in the implementation of pollution controls under the Act requires direct dischargers to obtain the "best available technology economically achievable" (BAT), as determined by the Administrator, according to enumerated considerations.³⁷ Originally BAT based limitations were

performance by plants of various sizes, ages and unit processes within each industrial category." LEGISLATIVE HISTORY 1972, *supra* note 2, at 169. *Accord* Tanners' Council of America, Inc. v. Train, 540 F.2d 1188, 1191-92 (4th Cir. 1976) (BPT based on average of the best in the subcategory); American Meat Inst. v. EPA, 526 F.2d 442, 461-62 (7th Cir. 1975) (the average of the best plants is used to determine BPT). If the technology within an industry is uniformly inadequate, the Administrator can "require higher levels of control than any currently in place if he determines that the technology to achieve those higher levels can be practicably applied." LEGISLATIVE HISTORY 1972, *supra* note 2, at 169-70.

The Act does not explicitly give the Administrator the power to promulgate BPT effluent limitations. *See Du Pont*, 430 U.S. at 128 (§ 301 "speaks only in the passive voice of the achievement and establishment of the limitations"). However, the EPA's power to promulgate binding § 301 effluent limitations was settled by the *Du Pont* Court's adoption of what had been the majority view of the circuits. *See Du Pont*, 430 U.S. at 125 n.15, 128-29 (Administrator of EPA has the power to set 1977 BPT effluent regulation) (citing *American Frozen Food Inst. v. Train*, 539 F.2d 107, 128 (D.C. Cir. 1976); *Hooker Chems. & Plastics Corp. v. Train*, 537 F.2d 620, 628 (2d Cir. 1976); *American Meat Inst.*, 526 F.2d at 452; *American Iron & Steel Inst. v. EPA*, 526 F.2d 1027, 1042 (3d Cir. 1975), *modified*, 560 F.2d 589 (3d Cir. 1977), *cert. denied*, 435 U.S. 914 (1978)). For a discussion of the position of the circuits prior to the Supreme Court's decision in *Du Pont*, see La Pierre, *supra* note 30, at 814-18.

36. *See* F. GRAD, *supra* note 18, § 3.03, at 3-152 to -153 (BPT limitations are the initial and least demanding limitations).

37. 33 U.S.C. § 1311(b)(2)(A) (1982). In promulgating the guidelines to be used in determining BAT for a particular point source, the Administrator must include the factors set out in § 304(b)(2)(B): "the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate." *Id.* § 1314(b)(2)(B). The factors which control the BAT determination are the same factors looked at in setting BPT with two exceptions. *Id.* *See* Note, *EPA v. National Crushed Stone Association*, 10 ECOL. L. Q. 161, 163-64 (1982). Best Available Technology standards "should, at a minimum, be established with reference to the best performer in any industrial category." LEGISLATIVE HISTORY 1972, *supra* note 2, at 170. *Accord* Tanners' Council of America, Inc. v. Train, 540 F.2d 1188, 1195 (4th Cir. 1976) (BAT limitations look to the best performer in the industry and to unused technology that will be available by the compliance deadline); American Meat Inst. v. EPA, 526 F.2d 442, 463 (7th Cir. 1975) (BAT should be established "with reference to the best performer in any industrial category" (quoting LEGISLATIVE HISTORY 1972, *supra* note 2, at 170 (statement of Sen. Muskie))). Best Available Technology limitations for a class of dischargers may consider technology in use by other categories of dischargers and technology "which can be applied as a result of public and private research efforts." LEGISLATIVE HISTORY 1972, *supra* note 2, at 170 (statement of Sen. Muskie). The Administrator's power to promulgate BAT effluent limitations has not been subject to serious challenge because § 301(b)(2)(A) calls for "'effluent limitations for categories and classes of point sources,'" a task seen as best suited for national regulation. *Du Pont*, 430 U.S. at 126-27 (quoting 33 U.S.C. § 1311(b)(2)(A) (1982)).

to be imposed by July 1, 1983.³⁸ The 1977 amendments to the Act extended the deadline one year for most regulated non-toxic pollutants³⁹ and replaced the BAT standard for conventional pollutants with a "best conventional pollutant control technology" (BCT) standard.⁴⁰

(2) *Publicly Owned Treatment Works*

Publicly owned treatment works (POTW's) are required to achieve effluent limitations based on "secondary treatment"⁴¹ as defined by the Ad-

38. See Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, § 2, 86 Stat. 899 (1972) (amended 1977).

39. See 33 U.S.C. § 1314(a)(4) (1982). These "conventional pollutants," labelled non-toxic pollutants, have traditionally been regulated: biological oxygen demand, suspended solids, fecal coliform and pH. *Id.* All other non-toxic pollutants are still regulated under BAT effluent limitations pursuant to § 301(b)(2)(F). See *id.* § 1311(b)(2)(F).

40. See 33 U.S.C. § 1311(b)(2)(E) (1982). The Federal Water Pollution Control Act was amended in 1977 to institute "necessary midcourse corrections" in federal water pollution control. See SENATE COMM. ON ENV'T. & PUB. WORKS, 95TH CONG. 2D SESS., A LEGISLATIVE HISTORY OF THE CLEAN WATER ACT OF 1977, A CONTINUATION OF THE LEGISLATIVE HISTORY OF THE FEDERAL WATER POLLUTION CONTROL ACT 181 (Comm. Print 1978) [hereinafter cited as LEGISLATIVE HISTORY 1977] (statement of the President). BCT effluent limitations are only applicable to those pollutants listed in, or those which could be listed pursuant to, § 304(a)(4). 33 U.S.C. § 1311(b)(2)(E) (1982). For the conventional pollutants listed in the Act, see note 39 *supra*.

To determine BCT for a particular category of sources the Administrator must consider the factors set out in § 304(b)(4)(B):

the reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived, and the comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources, and shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.

33 U.S.C. § 1314(b)(4)(B) (1982). Technology-based effluent limitations based on BCT are apparently a relaxation of the BAT standards, since the BCT factors are a mere restatement of the BPT factors with the addition of one "cost effectiveness" test. See F. GRAD, *supra* note 26 & 3.03[4][e], at 3-160 to -161 (discussing the requirements of BPT and BCT limitations). See also *American Paper Inst. v. EPA*, 660 F.2d 954, 956 (4th Cir. 1981) (two cost effectiveness tests are required under BCT). A Congressional conference described BCT as "the equivalent of best practicable technology or something a little bit better, even as far as best available technology in some circumstances." 123 CONG. REC. 38,978 (1977) (remarks of Rep. Johnson). For the list of the factors used in determining guidelines for BPT, see note 35 *supra*.

41. 33 U.S.C. § 1311(b)(1)(B) (1982). Waste water treatment by POTWs has traditionally been described as consisting of three steps: primary, secondary and advanced or tertiary treatment. See P. VESILIND, ENVIRONMENTAL POLLUTION AND CONTROL 63-76 (1975). Primary treatment generally involves the screening and settling of solids from the waste influent. *Id.* at 63-66. Secondary treatment is generally biological treatment, that is the "use [of] microbial action to reduce the energy level (BOD) of the waste." *Id.* at 67. Section 304(d)(4) of the Act lists several accepted

ministrator pursuant to section 304(d).⁴²

(3) *Indirect Dischargers*

Indirect dischargers, those industrial plants which discharge their effluents into POTW's for treatment, must comply with the Act's pretreatment regulations.⁴³ Section 307 of the Act requires the Administrator to promulgate regulations establishing pretreatment standards for any pollutant which will interfere with, pass through, or be incompatible with the POTW's treatment system.⁴⁴

(4) *New Sources of Pollutants*

Under section 306, newly constructed sources⁴⁵ are required to meet national effluent limitations based upon the "best available demonstrated control technology" (BADCT) standards.⁴⁶

secondary treatment technologies. See 33 U.S.C. § 1314(d)(4) (1982). Advanced or tertiary treatment is any of a "wide variety of methods" used to reduce the remaining pollutants in the waste stream. P. VESILIND, *supra*, at 73.

42. See 33 U.S.C. § 1314(d) (1982). Under § 304(d), the Administrator "shall publish . . . information . . . on the degree of effluent reduction attainable through the application of secondary treatment [and] . . . information on alternative waste treatment management techniques." *Id.* § 1314(d)(1)(2). Another very important aspect of the regulation of POTWs, which is beyond the scope of this note, is the construction grant program of subchapter II of the Act. See *id.* §§ 1281-1299. The purpose of the construction grant program is "to require and to assist the development and implementation of waste treatment management plans and practices." *Id.* § 1281(a).

43. See *id.* § 1317(b)(1).

44. See *id.* § 1317. Under § 307 the Administrator is directed to publish regulations establishing pretreatment standards for any pollutant which "interferes with, passes through, or otherwise is incompatible with [POTWs]." *Id.* § 1317(b)(1). To date, the Administrator has focused his pretreatment rulemaking on toxic pollutants. See *Metal Finishers*, 719 F.2d at 638, 645 n.25 (remanding regulations for redefinition of "interference" and "pass through"). For a further discussion of *Metal Finishers*, see notes 102-10 and accompanying text *infra*. The Administrator has probably focused his attention upon pretreatment of toxic pollutants because the nature of toxic pollutants indicates that they inevitably "interfere" with normal biological treatment in a POTW. See 33 U.S.C. § 1362(13) (1982) (defining a toxic pollutant as something which will cause death, disease, etc. in organisms); *cf.* note 41 *supra* (describing secondary treatment of most POTWs as biological treatment by microbial organisms).

45. 33 U.S.C. § 1316(a)(2)(1982). A "new source" for purposes of § 306 is defined in § 306(a)(2) as "any source, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance . . . which will be applicable to such source, if such standard is thereafter promulgated in accordance with this section." *Id.*

46. *Id.* § 1316(a)(1), (b)(1)(B). Congress intended that BADCT be the "maximum feasible control of new sources." LEGISLATIVE HISTORY 1972, *supra* note 2, at 1476. See also 33 U.S.C. § 1316(a)(1) (1982) (standards of performance should "reflect[] the greatest degree of effluent reduction . . . achievable through . . . [BADCT]"). To determine what the BADCT is for a particular category of sources the Administrator must consider any information generated through § 304(c) under which the Administrator is to gather and "issue to the States and appropriate water pollution control agencies . . . information on the processes, procedures or operating

(5) *Toxic Pollutants*

Toxic pollutants⁴⁷ are subject to BAT-based effluent limitations for

methods which result in the elimination or reduction of the discharge of pollutants Such information shall include technical and other data, including costs, as are available on alternative methods of elimination or reduction of the discharge of pollutants." *Id.* § 1314(c). One commentator has noted that Congress intended that a BADCT standard "should reflect the level of effluent reduction attainable by the combination of control technology and improvements in production processes." La Pierre, *supra* note 30, at 826. This requirement will be at least as stringent as the BAT effluent limitations category on an industry. *Id.*

Section 306 standards of performance become effective on promulgation by the Administrator. 33 U.S.C. § 1316(b)(1)(B) (1982).

47. 33 U.S.C. § 1362(13) (1982). Toxic pollutants are defined in § 502(13) as those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

Id.

Section 307 of the Act was the sole provision regulating toxic pollutants prior to the 1977 amendments. *See* Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, § 2, 86 Stat. 844 (1972) (codified as amended at 33 U.S.C. § 1311 (1982)). Under § 307 the Administrator is authorized to promulgate health-based effluent limitations which will insure an "ample margin of safety." 33 U.S.C. § 1317(a)(4) (1982). When the EPA did not exercise its § 307 authority, the Natural Resources Defense Council (NRDC) sued the EPA to force it to promulgate regulations controlling toxic pollutants. *See* Natural Resources Defense Council v. Train, 8 Env't. Rep. Cas. (BNA) 2120 (D.D.C. 1976). The resulting consent decree is contained in the court's order which is often referred to as the "Flannery settlement," in reference to the presiding judge. *See id.* at 2122-36. For an excellent discussion of the history and impact of this consent decree, see Hall, *The Control of Toxic Pollutants Under the Federal Water Pollution Control Act Amendments of 1972*, 63 IOWA L. REV. 609, 612-14 (1978).

The "Flannery settlement" forced the Administrator to promulgate technology-based effluent limitations for toxic pollutants instead of the original health-based limits, and was accepted for the most part by the Congress in the 1977 amendments to the Act. *See* 33 U.S.C. § 1311(b)(2)(C), (D) (1982); *See also* LEGISLATIVE HISTORY 1977, *supra* note 40, at 455 ("The conference agreement was specifically designed to codify the so-called 'Flannery decision' . . ."). For a discussion of the regulation of toxics under § 301, see note 48 and accompanying text *infra*.

The "Flannery settlement" consent decree forced the Administrator to regulate 65 specific toxic pollutants. *See* Natural Resources Defense Council v. Train, 8 Env't Rep. Cas. (BNA) 2120, 2124, 2129-30 (D.D.C. 1976). This list of pollutants was incorporated by reference into the 1977 amendments to the Act. *See* 33 U.S.C. § 1317(a)(1) (1982). BAT effluent limitations for these "Flannery pollutants" must have been met by July 1, 1984. *Id.* § 1311(b)(2)(C). The Administrator may add or subtract pollutants from this toxics list, taking into account certain factors listed in § 307(a)(1), such as "toxicity of the pollutant, its persistence, degradability, the usual or potential presence of the affected organisms in any waters, the importance of the affected organisms, and the nature and extent of the effect of the toxic pollutant on such organisms." *Id.* § 1317(a)(1). Any pollutant added to the toxic list must meet BAT standards promulgated for that pollutant "not later than three years after the date such limitations are established." *Id.* § 1311(b)(2)(D).

classes and categories of sources.⁴⁸ In addition, section 307 authorizes the Administrator to set generally applicable health-based effluent standards based on categories of pollutants, but only if they are more stringent than the categorical BAT-based limitations.⁴⁹

For each of the technology-based effluent standards just discussed—BPT, BAT, BCT, secondary treatment, pretreatment, and BADCT—the Administrator promulgates single-number effluent limitations to be applied to each source within a designated class or category.⁵⁰ These single-number

48. See 33 U.S.C. § 1311(b)(2)(C), (D) (1982). The BAT standard for regulation of toxic pollutants is set by the same procedure as is used in setting BAT for non-conventional pollutants under section 301(b)(2)(F). See *id.* § 1311(b)(2)(F). For a description of the procedure used to set BAT guidelines and of the § 304 factors taken into account by the Administrator in so doing, see note 37 *supra*. For a general discussion of the consent decree which originally forced EPA to promulgate technology-based effluent standards for toxic pollutants, see note 47 *supra*. For a discussion of some perceived benefits of regulation to both the EPA and environmentalists after the settlement agreement, see Hall, *supra* note 47, at 620-24.

Mounting Congressional concern over the discharge of toxic pollutants into this country's waters was evident in the 1972 and 1977 amendments to the FWPCA. See 33 U.S.C. § 1251(a)(3) (1982) (policy of Act is "that the discharge of toxic pollutants in toxic amounts be prohibited"); see also LEGISLATIVE HISTORY 1977, *supra* note 40, at 455 ("discharge of toxic pollutants should be eliminated as soon as possible"); F. GRAD, *supra* note 28, § 3.03[4][g], at 3-171 ("As amended in 1977, the [Act] places considerably greater emphasis on the regulation of toxic pollutants. . . .").

49. See 33 U.S.C. § 1317(a)(2) (1982). After the 1972 amendments and prior to the "Flannery settlement" in 1976, § 307 health-based standards were the only limitations on toxic pollutants under the Act. See Federal Water Pollution Control Amendments, Pub. L. 92-500, § 2, 86 Stat. 816, 856 (1972) (codified as amended at 33 U.S.C. § 1317 (a)(2) (1982)). For a discussion of the "Flannery settlement," see note 47 *supra*. Section 307(a)(2) now states:

The Administrator, in his discretion, may publish in the Federal Register a proposed effluent standard (which may include a prohibition) establishing requirements for a toxic pollutant which, if an effluent limitation is applicable to a class or category of point sources, shall be applicable to such category or class only if such standard imposes more stringent requirements. Such published effluent standard (or prohibition) shall take into account the toxicity of the pollutant, its persistence, degradability, the usual or potential presence of the affected organisms in any waters, the importance of the affected organisms and the nature and extent of the effect of the toxic pollutant on such organisms, and the extent to which effective control is being or may be achieved under other regulatory authority.

33 U.S.C. § 1317(a)(2) (1982). Regulation of toxic pollutants under § 307 is on a pollutant-by-pollutant basis, as opposed to an industry-by-industry basis, which is applied to non-toxic pollutants pursuant to § 301. Hall, *supra* note 47, at 613, 620-21 (noting that the § 307 health-based limitation was described by EPA as the "pollutant of the month" approach).

50. See, e.g., 33 U.S.C. § 1311(b)(2)(A) (1982) (sources within a defined class or category shall achieve BAT as determined by the Administrator). The Administrator's power to promulgate single number effluent limitations for classes and categories of sources was settled in *E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112 (1977). Prior to *Du Pont* there was a disagreement among the circuits as to whether the Administrator could promulgate binding effluent limitations. *Id.* at 125 n.15. For a discussion of the disagreement between the circuits on the Administrator's power to issue effluent limitations, see note 35 *supra*. There was also a disagreement among the circuits as to whether effluent limitations promulgated by the Administra-

effluent limitations are included as conditions on each source's NPDES permit.⁵¹

The Administrator's determinations with respect to effluent limitations and NPDES permit applications are reviewable in the court of appeals.⁵² The provisions of the FWPCA may be enforced by the federal government,

tor could be single-number limitations, such as one pound per day per source, or whether the limitations had to provide for a range of discharges, such as one to five pounds per day per source, with the specific single-number limits being set by the permitting authority. *See Du Pont*, 430 U.S. at 125 n.15. *Compare* Grain Processing Corp. v. Train, 407 F. Supp. 96, 105 (S.D. Iowa) (Congress intended a range of effluent limitations, therefore single-number effluent limitations inappropriate), *remanded mem.*, 547 F.2d 1172 (8th Cir. 1976) *with* E. I. du Pont de Nemours & Co. v. Train, 541 F.2d 1018, 1028-30 (4th Cir. 1976) (single-number effluent limitations may be established for classes and categories of sources), *aff'd in part, rev'd in part*, 430 U.S. 112, 128 (1977) (single-number BPT-based technology limits may be established "so long as some allowance is made for variations in individual plants"). For a discussion of the Supreme Court's tacit approval of FDF variances in *Du Pont*, see notes 80-81 and accompanying text *infra*.

The effluent limitations applicable to a particular point source are those of the class or category in which the particular industry is intended, as determined by the Administrator in the promulgation of the effluent limitations. *See* 33 U.S.C. § 1311(b)(2)(A) (1982). *See, e.g.*, National Crushed Stone Ass'n v. EPA, 601 F.2d 111, 112 (4th Cir. 1979) (example of subcategorization in the "crushed stone and construction sand and gravel subcategories of the mineral mining and processing point source category"), *rev'd*, 449 U.S. 64 (1980); American Meat Inst. v. EPA, 526 F.2d 442, 446, 457-62 (7th Cir. 1975) (example of subcategorization of the "Red Meat Processing Segment of the Meat Products Point Source Category," and challenges to effluent limitations for each subcategory). For an example of extensive categorization, subcategorization and subdivision of subcategories, see *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1053 (D.C. Cir. 1978) (within the pulp and paper industry there were "16 subcategories, divided into 66 subdivisions," on the average of "one set of limitations to every five mills"). A subcategory's effluent limitation will not be applicable to a discharger within that subcategory if the particular discharger has obtained a variance. For a discussion of variances, see notes 60-89 and accompanying text *infra*.

51. For a discussion of the NPDES permit system, see note 32 and accompanying text *supra*.

52. 33 U.S.C. § 1369(b)(1) (1982). These determinations by the Administrator are only reviewable by the circuit court within 90 days after the Administrator's actions. *Id.* Review based on an application filed after the 90 day period is available only if the grounds for such review arose within the 90 day period. *Id.* As of November 1, 1976, seven circuits had reviewed BPT and BAT § 301 effluent limitations under § 409 for 11 different industries. *La Pierre*, *supra* note 30, at 818. Of these 11 sets of limitations, the circuits remanded for reconsideration or reregulation the bulk of seven sets, upheld the bulk of three sets and upheld all of the limitations in only one set. *Id.*

The Administrator's decision to veto a state permit is considered a denial of a permit and is therefore directly reviewable in the appropriate circuit court. *See* *Crown Simpson Pulp Co. v. Costle*, 445 U.S. 193 (1980) (*per curiam*). Similarly the decision to veto a state granted variance is also treated as a denial of a permit. *See* *Georgia-Pacific Corp. v. EPA*, 671 F.2d 1235, 1239 (9th Cir. 1972) (affirming EPA veto of state approved variance). On the other hand, the Administrator's failure to veto a state-issued permit is not "issuing or denying a permit" by the Administrator and therefore cannot be reviewed under § 509. *See* *Save the Bay, Inc. v. Administrator of the EPA*, 556 F.2d 1282, 1290-96 (5th Cir. 1977) (the failure to veto, although

the state governments,⁵³ or private citizens.⁵⁴ To date the bulk of the enforcement actions have been brought by the federal government, despite evidence that Congress intended the states to be the primary enforcers.⁵⁵

C. Variance Provisions Under the Act

Although national technology-based effluent limitations appear inflexible, a certain degree of flexibility is contemplated in their formulation as

not reviewable in Federal Circuit Courts of Appeal under the Clean Water Act, may be reviewable in federal district court under the Administrative Procedure Act).

After the 90 day period of reviewability any issue that could have been reviewed under § 509(b)(1) is expressly precluded from review "in any civil or criminal proceeding for enforcement." 33 U.S.C. § 1369(b)(2) (1982). The "issuance or denial" date which starts the 90 day challenge period is the date that the discharger receives effective notice of such "issuance or denial." See *Georgia-Pacific Corp. v. EPA*, 671 F.2d 1235, 1239-40 (9th Cir. 1982) (holding petitioner's challenge was timely under § 509 even though it was received 96 days after EPA denial of the permit variance because it was received within 90 days of effective notice of denial).

53. 33 U.S.C. § 1319 (1982). The federal and state enforcement provisions of the Act are found in § 309. *Id.* When the Administrator determines that a source is not in compliance with either a state-issued or a federally-issued permit or one of the effluent limitations under the Act, the Administrator can issue a compliance order pursuant to § 309(a)(2) or bring a civil action against the source pursuant to § 309(b). *Id.* In the case of a state-issued permit the Administrator may either bring direct enforcement or he may notify the State to allow state enforcement. *Id.* § 1319(a)(1). If the state does not bring an action within 30 days of notice of the discharger's violation the Administrator "shall" bring direct enforcement. *Id.* Possible remedies under the Act include compliance orders, civil penalties, and criminal penalties for willful violations. *Id.* § 1319. For an in-depth discussion of enforcement under the Clean Water Act, see Comment, *Federal Water Pollution Laws: A Critical Lack of Enforcement by the Environmental Protection Agency*, 20 SAN DIEGO L. REV. 945 (1983). See also F. GRAD, *supra* note 28, § 3.03[10], at 3-317 to -342. The enforcement provisions in the Clean Water Act were drawn extensively from the enforcement procedures in the Clean Air Act. LEGISLATIVE HISTORY 1972, *supra* note 2, at 1481.

54. 33 U.S.C. § 1365 (1982). Private citizens are expressly granted a cause of action against dischargers for violations of effluent limitations or compliance orders. *Id.* § 1365(a)(1). Citizens may also bring suit against the Administrator to force him/her to perform a nondiscretionary act. *Id.* § 1365(a)(2). See *Natural Resources Defense Council v. EPA*, 8 Env't Rep. Cas. (BNA) 2120 (D.D.C. 1976) (action to force the Administrator to perform his nondiscretionary duty of regulating toxic pollutants). The United States District Courts are granted jurisdiction over these citizen suits without regard to the amount in controversy or the citizenship of the parties. 33 U.S.C. § 1365(a) (1982). Citizen suits for enforcement are not private actions for damages, but for vindication of a public right. See *Middlesex County Sewerage Auth. v. National Sea Clammer's Ass'n.*, 453 U.S. 1 (1981) (there is no private right of action under the Clean Water Act). For a general discussion of undue restriction on citizen enforcement under the Act, see Comment, *supra* note 53, at 954-56.

55. See LEGISLATIVE HISTORY 1972, *supra* note 2, at 1482 (Congress intended that the "great volume of enforcement actions be brought by the State"). There are various reasons why state enforcement of the Clean Water Act has not lived up to expectations: (1) only states with permit programs can prosecute permit violators; (2) there is a strong political desire to avoid antagonizing industry; and (3) there are difficulties tied to the interstate nature of water pollution. Comment, *supra* note 53, at 951.

well as in their application.⁵⁶ Formulation of each technology-based limitation involves some consideration of cost.⁵⁷ In addition, individual industries may be categorized and subcategorized until a "national uniform limitation" includes only a handful of dischargers.⁵⁸ Moreover, the effluent limitations themselves are flexible in that the limits are normally applied on a monthly average basis with allowance for much larger daily discharges.⁵⁹

The Clean Water Act contains variance or modification⁶⁰ provisions which may alter the applicable effluent limitation in the case of a particular discharger, usually resulting in a more lenient limitation.⁶¹ The most significant variance provisions for industrial dischargers are the economic and en-

56. See Baum, *Legislating Cost-Benefit Analysis: The Federal Water Pollution Control Act Experience*, 9 COLUM. J. ENV. L. 75, 108 (1983) (characterizing the FWPCA standards of performance as posing no undue economic burdens in comparison to other environmental legislation).

57. See 33 U.S.C. § 1314(b)(1)(B), (b)(2)(B), (b)(4)(B) (1982). The factors to be considered in establishing BPT include a comparison of the "total cost of application of technology in relation to the effluent reduction benefits to be achieved." *Id.* § 1314(b)(1)(B). For a discussion of the factors used to set BPT and the relevant portion of § 304(b)(1)(B), see note 35 *supra*. The factors to be considered in establishing BAT and BADCT standards include a consideration of the "cost of achieving such effluent reduction." 33 U.S.C. § 1314(b)(2)(B) (1982). For a discussion of the factors used to set BAT and BADCT and the relevant portion of § 304(b)(2)(B), see notes 37 & 46 *supra*. The BCT standard includes two cost comparisons, one relating cost to the effluent benefit derived and the other relating a non-POTW source's cost to the cost a POTW would incur to reach the same level of treatment. 33 U.S.C. § 1314(b)(4)(B) (1982). For a discussion of the factors used to set BCT and the relevant portion of § 304(b)(4)(B), see note 40 *supra*.

58. See 33 U.S.C. § 1311(b)(2)(A) (1982) (discussing the Administrator's power to set effluent limitations for "categories and classes of point sources"). See also *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1053 (D.C. Cir. 1978) (16 subcategories with 66 subdivisions, creating, on the average, one set of limitations for every five paper mills). For other examples of subcategorization, see note 31 *supra*.

59. See, e.g., *American Meat Inst. v. EPA*, 526 F.2d 442, 448 (7th Cir. 1975) ("The maximum discharge for any individual day is twice the maximum daily average for any 30 consecutive days."); 40 C.F.R. § 408.42 (1983) (effluent limitations for the Non-Remote Alaskan Crab Meat Processing subcategory with a maximum discharge for any one day equal to three times the 30 day average). The EPA need not make allowance for "excursions," or unintentional discharges in excess of the monthly average or daily maximum permit limitations. See *Corn Refiners Ass'n v. Costle*, 594 F.2d 1223 (8th Cir. 1979) (EPA not required to make provision for "excursions" in the corn wet milling industry).

60. See 33 U.S.C. § 1311(c), (g), (i), (k) (1982). The Act refers only to "modifications," not variances as such. See *id.* At this point, the author uses the terms "modification" and "variance" interchangeably. For further discussion of whether a distinction should be drawn between a modification and a variance, see notes 86, 100 & 105 *infra*.

61. See 33 U.S.C. § 1311(c), (g), (i), (k) (1982). Modifications of BAT limitations are possible under § 301(c), (g), (i) and (k). *Id.* § 1311(c) (economic variance); *id.* § 1311(g) (environmental variance); *id.* § 1311(i) (municipal time extensions); *id.* § 1311(k) (extension for use of innovative technology). For a discussion of the distinction which some suggest should be drawn between a "modification" and a "variance," see notes 100 & 105 and accompanying text *infra*. For a discussion of § 301(c) and § 301(g) variances, see notes 63-67 & 68-71 and accompanying text *infra*.

vironmental modifications of BAT effluent limitations for nontoxic pollutants.⁶²

Under section 301(c), a source is entitled to an economic variance upon a showing that the modified requirement "(1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants."⁶³ This modification of limitations on the basis of an individual source's economic inability to comply has been limited to BAT limitations, as opposed to the more lenient BPT limitations.⁶⁴ In *EPA*

62. See 33 U.S.C. § 1311(c) (1982) (economic variance); *id.* § 1311(g) (environmental variance). Section 301(c) states:

(c) The Administrator may modify the requirements of subsection (b)(2)(A) of this section with respect to any point source for which a permit application is filed after July 1, 1977, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants.

Id. § 1311(c). Section 301(g) states:

(g)(1) The Administrator, with the concurrence of the State, shall modify the requirements of subsection (b)(2)(A) of this section with respect to the discharge of any pollutant (other than pollutants identified pursuant to section 1314(a)(4) of this title, toxic pollutants subject to section 1317(a) of this title, and the thermal component of discharges) from any point source upon a showing by the owner or operator of such point source satisfactory to the Administrator that—

(A) such modified requirements will result at a minimum in compliance with the requirements of subsection (b)(1)(A) or (C) of this section, whichever is applicable;

(B) such modified requirements will not result in any additional requirements on any other point or nonpoint source; and

(C) such modification will not interfere with the attainment or maintenance of that water quality which shall assure protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities, in and on the water and such modification will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity, or teratogenicity), or synergistic propensities.

(2) If an owner or operator of a point source applies for a modification under this subsection with respect to the discharge of any pollutant, such owner or operator shall be eligible to apply for modification under subsection (c) of this section with respect to such pollutant only during the same time period as he is eligible to apply for a modification under this subsection.

Id. § 1311(g).

63. *Id.* § 1311(c).

64. *EPA v. National Crushed Stone Ass'n.*, 449 U.S. 64, 68, 72 (1980) (individual economic inability to comply may warrant a § 301(c) variance from a BAT limi-

v. National Crushed Stone,⁶⁵ the Supreme Court explained that section 301(c) variances are in effect particularized BAT determinations for individual point sources, since the two 301(c) factors “represent[] . . . the same sort of economic and technological commitment [for the individual source] as the general BAT standard creates for the class.”⁶⁶ The *National Crushed Stone* Court also stated that “[a]s with the general BAT standard, the [§ 301(c)] variance assumes that the 1977 BPT standard has been met by the point source and that the modification represents a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges.”⁶⁷

Under section 301(g) an environmental variance may be granted from BAT-based effluent limitations whenever the modified requirements will

tation, but is neither a required nor an appropriate consideration in granting a variance from a BPT limitation).

As previously discussed, the FWPCA was designed to accomplish the implementation of water pollution control technology by existing point sources in two steps. For a discussion of the BPT and BAT stages of implementation, see notes 33-40 and accompanying text *supra*. In the first step, the Administrator was to set effluent limitations reflecting the best practicable technology currently available (BPT), and individual sources were to comply by 1977. See 33 U.S.C. § 1311(b)(1)(A) (1982). The BPT stage was intended to achieve a national level of minimum compliance by 1977. See *National Crushed Stone*, 449 U.S. at 75-78. In determining what control technology was required under BPT, the Administrator was to compare the technology’s “total cost” (to average sources in a given industry) to its benefits (in terms of effluent reduction). See 33 U.S.C. § 1314(b)(1)(B) (1982). See also Baum, *supra* note 56, at 77, 98-102. For further discussion of the factors considered in setting BPT, see note 35 and accompanying text *supra*. It was anticipated that certain plants within a given industry would not be able to afford to meet the minimum level of technology established under BPT, and that these plants would be forced to close down. See *National Crushed Stone*, 449 U.S. at 75-76, 80-83. However, administrative modification of the BPT-based limitation was provided where an individual source could show that its own costs of compliance were considerably greater than the “total cost” to the average sources considered by EPA in setting the industry standard. See *id.* at 66 & n.2; see also Note, *EPA v. National Crushed Stone Ass’n*, 7 COLUMB. J. ENV. L. 165, 168, 173-74 (1982). For a discussion of the administrative variance based on fundamentally different factors, see notes 76-89 and accompanying text *infra*.

In *National Crushed Stone*, the Supreme Court held that an individual source’s economic inability to comply with BPT standards did not warrant an FDF (fundamentally different factor) variance where the cost to that source was not fundamentally different from the cost to other sources in its source category. 449 U.S. at 75-78. For further discussion of *National Crushed Stone*’s analysis, see notes 82-83 & 85-88 and accompanying text *supra*.

Further, the *National Crushed Stone* Court reaffirmed its position that § 301(c) variances were not available to modify BPT limitations. 449 U.S. at 73-74 & n.13 (citing *E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112 (1977)). For further discussion of *du Pont* in the context of fundamentally different factor variances from BPT limitations, see note 81 and accompanying text *infra*.

65. 449 U.S. 66 (1980).

66. *Id.* at 74.

67. *Id.* For further discussion of *National Crushed Stone*, see notes 82-83 & 85-88 and accompanying text *infra*. See also F. GRAD *supra* note 28, at § 3.03[4][h], at 3-180 to -183; Note, *supra* note 64; Note, *supra* note 37.

(1) meet BPT or more stringent water quality standards,⁶⁸ (2) will not result in any additional requirements on other dischargers,⁶⁹ and (3) will not interfere with the Act's fishable/swimmable goal⁷⁰ or pose an "unacceptable" risk to human health or the environment.⁷¹

In the context of toxic pollutants, however, Congress expressed an intent to impose firm standards: section 301(l), added in 1977,⁷² expressly prohibits the "modification"⁷³ of any requirements for toxic pollutants,⁷⁴ including BAT-based effluent limitations.⁷⁵

D. *Fundamentally Different Factor (FDF) Variance*

1. *Validity*

Despite these express variance provisions in the Clean Water Act, the most commonly employed and litigated variance procedure is not statutory but administrative, created by the EPA under its section 501 rulemaking authority.⁷⁶ In 1974, in response to public comments that proposed BPT-based effluent limitations were too inflexible, the EPA began to include "Fundamentally Different Factor" (FDF) variance provisions in all BPT ef-

68. 33 U.S.C. § 1311(g)(1)(A) (1982).

69. *Id.* § 1311(g)(1)(B).

70. *Id.* § 1251(a)(2). For the text of § 101(a), see note 28 *supra*.

71. 33 U.S.C. § 1311(g)(1)(C) (1982). Section 301(g) variances are termed environmental variances because of the water quality and health factors considered. For further discussion of § 301(g) variances, see Kalur, *Will Judicial Error Allow Industrial Point Sources to Avoid BPT and Perhaps BAT Later? A Story of Good Intentions, Bad Dictum, and Ugly Consequences*, 7 *ECOL. L. Q.* 955, 983-85 (1979).

72. See LEGISLATIVE HISTORY 1977, *supra* note 40, at 460. Senator Muskie stated that a "toxic effluent standard applies to the pollutant *per se* and cannot be exceeded by any source of that pollutant unless the Administrator makes a separate categorical determination." *Id.* Section 301(l) would not have been necessary prior to 1977 because toxic pollutants were primarily regulated with health-based limitations before the 1977 amendments. Health-based limitations are based on the effect a pollutant has on the environment or human health. See *id.* See also 33 U.S.C. § 1317 (1982) (regulating toxic pollutants with standards based on toxicity). Technology-based standards, however, are based on a particular type of technology applied to an individual pollutant in a class or category of sources. See *id.* § 1311(b)(2)(A) (1982) (BAT technology). For further discussion of the regulation of toxic pollutants through health-based and technology-based limitations, see notes 47-49 *supra*.

73. For a discussion of the term "modification" as used in § 301(l) and its relation to the term "variance," see notes 100 & 105 and accompanying text *infra*.

74. For the definition of "toxic pollutant" under the Act, see note 47 *supra*. For a discussion of the regulation of toxic pollutants under the Act, see notes 47-49 and accompanying text *supra*.

75. 33 U.S.C. § 1311(l) (1982). This section states that "[t]he Administrator may not modify any requirement of this section as it applies to any specific pollutant which is on the toxic pollutant list under section 1317(a)(1) of this title." *Id.*

76. See 33 U.S.C. § 1361(a) (1982) ("[t]he Administrator is authorized to prescribe such regulations as are necessary to carry out his functions under this Chapter").

fluent limitation regulations.⁷⁷ Under an FDF variance a discharger may be subject to stricter or more lenient provisions⁷⁸ than those applicable to his class or category upon a showing that "factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines."⁷⁹

The Supreme Court, in *E. I. du Pont de Nemours & Co. v. Train*,⁸⁰ indicated that a variance provision was a necessary component to single number BPT-based limitations for classes and categories of point sources.⁸¹ This in-

77. See, e.g., 39 Fed. Reg. 28,926-27 (1974). This typical FDF variance provision states:

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors . . . which can affect the industry sub-categorization and effluent levels established. . . . An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are *fundamentally different* from the factors considered in the establishment of the guidelines. . . . If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

Id. at 28,926 (emphasis added).

78. See note 77 *supra*. As an "interested party" under an FDF variance provision, a private citizen or environmental group could theoretically cause stricter effluent limitations to be applied to a discharger based on an FDF variance. See 39 Fed. Reg. 28,926 (1974) (the Administrator shall establish effluent limitations "either more or less stringent . . . to the extent dictated by such fundamentally different factors"). However, this would appear to be a "most unlikely possibility, given: (1) the intimate familiarity with the production process and cleanup state-of-the-art that would be required to force alteration; and (2) the general lack of knowledge of particular plant cleanup status that exists outside the administrative process." Kalur, *supra* note 71, at 962 n.33.

79. 39 Fed. Reg. 28,926 (1974). For the full text of this early FDF regulation, see note 77 *supra*. For an example of a newer FDF variance promulgated for pretreatment standards, see 40 C.F.R. § 420.13 (1983) (FDF variances from pretreatment standards).

80. 430 U.S. 112 (1977).

81. *Id.* at 128. For a discussion of the Administrator's power to promulgate single number BPT effluent limitations, see note 35 *supra*.

The Court stated: "We conclude that the statute authorizes the 1977 [BPT] limitations as well as the 1983 [BAT] limitations to be set by regulation, so long as some allowance is made for variations in individual plants, as EPA has done by including a variance clause in its 1977 [BPT] limitations." 430 U.S. at 128. However, the Court went on to say that review of the variance procedure promulgated by EPA was premature at that time. *Id.* n.19. See *National Crushed Stone*, 449 U.S. at 72-74 & nn.12-13 (implicitly assuming FDF variances are valid by stating that *Du Pont* required variances for BPT and that § 301(c) variances are not applicable to BPT).

dication was strengthened by the Court's later decision in *EPA v. National Crushed Stone Association*.⁸² In *National Crushed Stone*, the Court said that *Du Pont* had required a variance provision for single number limitations and had assumed that section 301(c) variances were not available for BPT limitations.⁸³ The courts of appeals which have directly considered the validity of FDF variances have found the FDF variance procedure to be valid.⁸⁴

2. Relevant Factors

The Supreme Court in *National Crushed Stone* held that a source's economic capability to comply with BPT limitations is not a proper consideration in an FDF variance determination.⁸⁵ The Court based this decision on two factors. First, section 301(c) variances, which include considerations of

Neither party to the case had briefed or argued issues relating to approval of FDF variances. See Kalur, *supra* note 71, at 973. The Supreme Court also held that no variance provision need be provided for new sources, because Congress intended new source limits to be absolute prohibitions; and no variance is appropriate where "maximum feasible control" is sought. 430 U.S. at 138. For criticism of what is seen as inconsistent treatment for new source limitations, see Kalur, *supra* note 71, at 973-74.

FDF variance provisions had been included in most effluent limitations, since at least 1974. See 39 Fed. Reg. 28,926-27 (1974) (presentation of policy to include FDF variance provisions in effluent limitations promulgated).

82. 449 U.S. 64 (1980). In *National Crushed Stone* the respondents were industries engaged in the coal mining industry and a portion of the mineral mining and processing industry. *Id.* at 66. The respondents had challenged the Administrator's interpretation of the Act and the FDF variance clauses as being too restrictive in failing to include § 301(c) factors. *Id.* at 68-69.

83. 449 U.S. at 72-74 & nn.12-13. Given these two statements, (1) that BPT limits need variances to be valid, and (2) that 301(c) variances are not proper for BPT, the Court seems to have assumed the validity of FDF variances in general without directly deciding the issue. See *id.*

84. See *Natural Resources Defense Council v. EPA*, 537 F.2d 642 (2d Cir. 1976) (upholding the validity of the FDF variance provision based on the Fourth Circuit's *Du Pont* analysis, the need for a "safety valve," and the unworkability of what it saw as the only alternative, extensive recategorization); *American Petroleum Inst. v. EPA*, 540 F.2d 1023 (10th Cir. 1976) (upholding the validity of FDF variances in general, based on *Natural Resources Defense Council* and the Administrator's general rulemaking authority under § 501); *E.I. du Pont de Nemours & Co. v. Train*, 541 F.2d 1018 (4th Cir. 1976) (upholding single number BPT limitations based in part on the availability of FDF variances), *modified*, 430 U.S. 112 (1977).

85. 449 U.S. at 72. The *National Crushed Stone* Court held that the economic capability of a discharger to comply need not be taken into account in a variance determination. *Id.* The Court stated that the cost of pollution control is considered in setting the BPT effluent limitation and therefore every BPT limitation "represents a conclusion by the Administrator that the costs imposed on the industry are worth the benefits in pollution reduction. . . ." *Id.* at 76. Adopting the EPA's interpretation of the Act, the Court indicated that a plant would secure a BPT variance by showing that its compliance costs were fundamentally different, "x times greater," than those considered by EPA. *Id.* at 68 n.5. By contrast, a variance would not be available if a plant simply could not afford to comply. *Id.* Justice White's opinion pointed out that Congress expected some dischargers to close because of inability or unwillingness to incur necessary pollution control expenditures. *Id.* at 80 (citing LEGISLATIVE HISTORY 1972, *supra* note 2, at 1282 ("many marginal plants may be forced to close"); *id.* at 231 (operators may decide to go out of business rather than meet the

economic capability, are limited to BAT limitations.⁸⁶ Second, the factors necessary for a section 301(c) variance are inconsistent with BPT limitations.⁸⁷ The Court also stated that the legislative history of the Act did not support economic capability considerations for FDF variances.⁸⁸

Although the Supreme Court has not addressed the issue, the circuits agree that the water quality of the body of water into which pollutants are discharged is not a relevant consideration in the FDF variance determination.⁸⁹

BPT limitations)). To alleviate this hardship, Congress provided for a low cost loan program for small businesses and protection for employees. 419 U.S. at 81, 82.

The decision by the Supreme Court in *National Crushed Stone* eliminated a conflict among the circuits as to whether economic ability to comply should be considered in a BPT variance determination. See Note, *supra* note 64, at 169-73 (discussing the conflicting positions of the Fourth Circuit and the District of Columbia Circuit).

86. 33 U.S.C. § 1311(c) (1982). Section 301(c) specifically refers to modifications of § 301(b)(2)(A), the section on BAT limitations. *Id.* For a discussion of § 301(c), see notes 61-64 and accompanying text *supra*.

87. 449 U.S. at 74-75. The factors listed in § 301(c) "parallel" the factors used to set BAT, thus creating for the point source the same sort of economic and technological commitment as the general BAT standard creates for a class. *Id.* at 79. No such parallel relationship exists between the § 301(c) factors and BPT limitations, in that BPT limitations require neither prior standards nor the "maximum use of technology within the economic capability of the owner or operator," both of which are required to obtain § 301(c) variance. *Id.* at 75. The Court also deferred to the EPA's interpretation of the FDF variance as an "individualized definition" of BPT, rather than an exception to BPT. *Id.* at 79 n.18; see *Metal Finishers*, 719 F.2d at 646 (§ 301(c) modifications serve the same purpose as FDF variances).

88. 449 U.S. at 68 n.5, 85. The total cost of the application technology, in relation to the effluent reduction benefits derived, is one of the factors used in § 304(b)(1)(B) to set BPT limitations. 33 U.S.C. § 1314(b)(1)(B) (1982). Since *National Crushed Stone* directs that the only factors that can be considered in an FDF variance are those factors used in setting the limitation, a source's total cost may be considered in a variance determination, but only if it is fundamentally different than the total cost considered by EPA in setting the BPT limitation. See 449 U.S. at 68 n.5 (statement of EPA's position on consideration of total cost); *id.* at 84-85 (accepting the EPA's interpretation of the Act).

89. See *Appalachian Power Co. v. EPA*, 671 F.2d 801 (4th Cir. 1982) (*Appalachian III*); *Crown Simpson Pulp Co. v. Costle*, 642 F.2d 323, 316 (9th Cir.), *cert. denied*, 454 U.S. 1053 (1981). The Supreme Court's decision in *National Crushed Stone* did not deal directly with considerations of receiving water quality, but only with considerations of economic ability. See *Crown Simpson Pulp*, 642 F.2d at 326 (*National Crushed Stone* only "implicitly" precludes consideration of receiving water quality). Following *National Crushed Stone*, circuit courts reasoned that the Supreme Court's holding, that the only factors which can be considered in an FDF variance determination are the factors used in setting the effluent limitation from which the variance is sought, indicated that receiving water quality may not be considered in an FDF determination from BPT limitations, since receiving water quality is not considered in setting BPT. See, e.g., *Appalachian Power Co. v. EPA*, 671 F.2d 801, 808 (4th Cir. 1982) (*Appalachian III*) (the Supreme Court's decision in "*National Crushed Stone* completely undercuts . . . required consideration of receiving water quality . . ."); *Crown Simpson Pulp Co. v. Costle*, 642 F.2d 323, 326 (9th Cir.) (inconsistent with Act to base variances on receiving water quality, relying in part on *National Crushed Stone*), *cert. denied*, 454 U.S. 1053 (1981).

3. *FDF Variances for Toxic Pollutants*

The 1977 amendments to the FWPCA imposed stringent requirements for the implementation of technological limitations on toxic pollutants.⁹⁰ Section 307(a)(1) requires the Administrator to publish a list of pollutants designated as toxic.⁹¹ Once he designates a pollutant as toxic, the Administrator is required to establish technology-based limitations based on a BAT standard for that particular pollutant.⁹² Furthermore, the 1977 amendments added section 301(f), which states: "The Administrator may not *modify* any requirement of this section as it applies to any . . . [designated] toxic pollutant. . . ."⁹³

Recently two courts of appeals have addressed the question of whether section 301(f) precludes the issuance of an FDF variance to direct or indirect dischargers of toxic pollutants.⁹⁴ In *Appalachian Power Co. v. Train (Appalachian II)*,⁹⁵ the Fourth Circuit decided that an FDF variance which had been

90. 33 U.S.C. § 1311(b)(2)(c)(b) (1982) (imposing technology-based effluent limitations). Prior to the 1977 amendments, the Act regulated toxic pollutants only with § 307 health-based effluent limitations. *Id.* § 1317. The health-based limitations proved too cumbersome to promulgate, so EPA generally did not use its § 307 authority. See *Natural Resources Defense Council v. Train*, 8 Env't. Rep. Cas. (BNA) 2120 (D.D.C. 1976) ("Flannery settlement"). The "Flannery settlement" forced EPA to promulgate best available technology-based effluent limitations for a list of 65 toxic pollutants. *Id.* at 2124, 2129-30. The "Flannery settlement" and the list of 65 toxic pollutants to be regulated were accepted by Congress and codified in the 1977 amendments. See Clean Water Act of 1977, Pub. L. 95-217, § 26(b), 91 Stat. 1567, 1582-90 (1977) (codified as amended at 33 U.S.C. § 1311(b)(2)(C), (D) (1982)); see also LEGISLATIVE HISTORY 1977, *supra* note 40, at 326-38. For further discussion of the regulation of toxic pollutants both before and after the 1977 amendments, see notes 47-49 and accompanying text *supra*.

91. See 33 U.S.C. § 1317(a)(1) (1982). For a discussion of how the "Flannery settlement" started the use of this pollutant list and how the list may be lengthened or shortened, see note 47 *supra*.

92. See 33 U.S.C. § 1311(b)(2)(C), (D) (1982). Prior to the 1977 amendments, the Act did not require the application of BAT-based effluent limitations to toxic pollutants. See notes 47 & 90 *supra*.

93. 33 U.S.C. § 1311(f) (1982) (emphasis supplied).

94. *National Ass'n. of Metal Finishers v. EPA*, 719 F.2d 624 (3d Cir. 1983) (§ 301(f) precludes issuance of FDF variances to indirect dischargers of toxic pollutants), *cert. granted sub nom.* *Chemical Mfrs. Ass'n. v. Natural Resources Defense Council, Inc.*, 104 S. Ct. 2167 (1984); *Appalachian Power Co. v. Train*, 620 F.2d 1040 (4th Cir. 1980) (*Appalachian II*) (§ 301(f) prohibition against modification of toxic pollutant limitations does not prohibit FDF variances). For a discussion of *Metal Finishers* and *Appalachian II*, see notes 102-10 & 95-101 respectively and accompanying text *infra*.

This issue concerns both direct discharge and pretreatment limitations because many of the pollutants regulated in pretreatment limits are toxic pollutants. *Metal Finishers*, 719 F.2d at 645 n.25 (to date the administrator has focused his pretreatment regulations effort on toxic pollutants). For further discussion of pretreatment regulations' relationship to toxic pollutants, see note 44 *supra*.

95. 620 F.2d 1040 (4th Cir. 1980). In *Appalachian II*, certain utilities contended that the Administrator had not followed an earlier court mandate to consider § 301(c) factors in the proposed regulation. *Id.* at 1044 (citing *Appalachian Power Co. v. Train*, 545 F.2d 1351 (4th Cir. 1976) (*Appalachian I*)). In *Appalachian I*, the

granted prior to the 1977 amendments was still valid after the 1977 amendments to the Act.⁹⁶ The case was unusual in that it dealt with a toxic pollutant originally regulated, prior to 1977, by a BPT-based effluent limitation.⁹⁷

The Fourth Circuit based its decision that section 301(l) did not invalidate the FDF variance from BPT standards on two grounds. First, the court felt that the 1977 amendments, in imposing the more exacting BAT standard of technological controls, did not evidence a congressional intent to operate retroactively.⁹⁸ Thus, the court was reluctant to invoke the subsequently-enacted section 301(l) prohibition to invalidate the FDF variance.⁹⁹ Second, the court found that the terms of section 301(l) were not clearly applicable to FDF variances from BPT limitations.¹⁰⁰ In light of this ambiguity, the court gave weight to the EPA's proposed interpretation, that the term "modified" was a term of art which referred to the Act's express modifi-

Fourth Circuit held that § 301(c) factors had to be considered in an FDF determination. See *Appalachian I*, 545 F.2d at 1359. But see *EPA v. National Crushed Stone Ass'n*, 449 U.S. 64 (1980) (§ 301(c) factors should not be considered in an FDF variance determination). In *Appalachian II*, the EPA had included BPT effluent limitations for toxics in the regulations promulgated for the steam electric industry. 620 F.2d at 1047.

96. 620 F.2d at 1047.

97. *Id.* Prior to 1977, toxic pollutants were traditionally regulated under the health based limitations of § 307. 33 U.S.C. § 1317 (1982). Contrary to general toxic standards the "Flannery settlement" forced the EPA to promulgate BPT-based technology standards for pretreatment regulation of eight particular categories of dischargers. *Metal Finishers*, 719 F.2d at 634. For further discussion of the health-based toxic limitations prior to 1977, the "Flannery settlement" and the 1977 amendments which led to technology based effluent limitations for toxic pollutants, see note 90 *supra*.

98. 620 F.2d at 1047-48. The court stated that there was no indication that the 1977 amendments were intended to "operate retroactively so as to possibly retract any variance previously issued to an industry which just happened to be discharging toxic substances, or to obliterate the known practice of EPA in not excluding toxic substances from those pollutants for which a variance might be granted under BPT effluent limitations." *Id.* at 1047. The court added that in general the retroactive application of a statute is not favored. *Id.* (citing *Union Pac. R.R. v. Laramie Stockyards Co.*, 231 U.S. 190, 199 (1913) (statute allowing adverse possession by railroads will not be given retrospective applications)).

99. 620 F.2d at 1047-48.

100. *Id.* The court stated:

[Section] 301(l) speaks to preventing the *modification* of any requirement of § 301 as it applies to any specific pollutant on the toxic pollutant list. On its face, it might thus be said to apply to such parts of the statute as § 301(c) which speak of *modifying* requirements for BAT limitations. . . . While this may well be an indication of Congressional intent that the statute should be read as EPA reads it, that § 301(l) applies only to those sections of § 301 which in terms permit *modification*, in all events the best that can be said for § 301(l) is that it is not clear. That being true, we give weight to the construction the administering agency has placed upon the statute, and, when we consider that retroactivity is not favored, we are of opinion [sic] that § 301(l) does not apply so as to require the exclusion of toxic substances from BPT variance provisions.

Id. (emphasis supplied by the court).

cation provisions, but did not include FDF variances.¹⁰¹

In 1983 the Third Circuit considered an FDF variance granted for toxic pollutants in the context of pretreatment regulations.¹⁰² In *National Association of Metal Finishers v. EPA*,¹⁰³ the Natural Resources Defense Council (NRDC) contended that an FDF variance provision for pretreatment standards for toxic pollutants was contrary to section 301(l)'s express prohibition on "modification" of toxic pollutant regulations.¹⁰⁴ The Third Circuit held that section 301(l)'s prohibition extended to variations from toxic limitations under an FDF variance.¹⁰⁵

The *Metal Finishers* court noted that the Supreme Court, in *National Crushed Stone*, had stated that section 301(c) modifications of BAT limits "serve the same function as FDF variances of BPT limits."¹⁰⁶ Thus, the

101. *Id.*

102. *National Ass'n. of Metal Finishers v. EPA*, 719 F.2d 624 (3d Cir. 1983), *cert. granted sub nom.* Chemical Mfrs. Ass'ns. v. Natural Resources Defense Council, Inc., 104 S. Ct. 2167 (1984). The pretreatment regulations at issue in *Metal Finishers* were for the electroplating point source category. *Id.* at 632. The categorical pretreatment standards at issue in *Metal Finishers* were set at a "BPT-level" analogous to direct dischargers pursuant to the consent decree in *Natural Resources Defense Council v. Train*, as modified. *Id.* at 634 (citing *Natural Resources Defense Council v. Train*, 8 Env't Rep. Cas. (BNA) 2120 (D.D.C. 1976) (as modified)). For a discussion of the *Natural Resources Defense Council v. Train* consent decree, known as the "Flannery settlement," see note 47 *supra*. The Administrator was to subsequently promulgate categorical pretreatment standards for all categories of pollutants listed in the consent decree. 719 F.2d at 634. In *Metal Finishers*, the Natural Resources Defense Council and a number of "industrial petitioners" challenged several aspects of the pretreatment regulations, including: (1) the definition of "interference" and "pass through"; (2) the definition of "new sources"; (3) the FDF variance provision; (4) a removal credits provision; and (5) the combined waste stream formula. *Id.* at 638.

The court's discussion of the inapplicability of FDF variances to toxic pollutant limitations appears to apply equally to BPT and BAT regulations for toxics, since *Metal Finishers* dealt with BPT limitations for toxics but spoke of the soon-to-be-promulgated BAT limitations. See *id.* at 643 (dealing with a regulation under which "direct dischargers may obtain FDF variances from BPT and BAT effluent limitations").

103. 719 F.2d 624 (3d Cir. 1983), *cert. granted sub nom.* Chemical Mfrs. Ass'n. v. Natural Resources Defense Council, Inc., 104 S. Ct. 2167 (1984).

104. 719 F.2d at 643. The NRDC challenged the Administrator's authority to provide for any variances from categorical pretreatment standards. *Id.* at 644. In addition, NRDC asserted that even if such authority existed it could not be used to allow variances for toxic pollutants. *Id.* at 645 (citing 33 U.S.C. § 1311(l) (1982)). Since the Court found the variance provision invalid, as applied to toxic pollutants, it did not address the Administrator's inherent authority to promulgate variance provisions for pretreatment standards. *Id.* at 645.

105. *Id.* at 645-46. The *Metal Finishers* court found that Congress did not intend the term "'modification' as a term of art so as to exclude variance provisions from the proscription of section 301(l)." *Id.* at 646. In support, it relied on the statements of two of the major proponents of the Act who had used the terms "waiver" and "modification" interchangeably. *Id.* (citing LEGISLATIVE HISTORY 1977, *supra* note 45, at 328-29 (statement of Senator Roberts); *id.* at 458 (statement of Senator Muskie)).

106. 719 F.2d at 646 (citing *National Crushed Stone*, 449 U.S. at 74). The Third Circuit noted that the *National Crushed Stone* Court described both § 301(c) modifica-

Third Circuit rejected the EPA's effort to distinguish section 301(c) modifications from FDF variances.¹⁰⁷ Judge Hunter reasoned: "If Congress were willing to prohibit section 301(c) modifications where toxic pollutants are concerned, it is difficult to imagine why Congress would have permitted similar FDF variances for those same pollutants."¹⁰⁸

In contrast to the Fourth Circuit in *Appalachian II*, the Third Circuit found section 301(l) clear in its intent to forbid all modifications of toxic pollutants.¹⁰⁹ The Third Circuit concluded: "Given the clear congressional concern throughout the 1977 amendments for discharges of toxic pollutants, we hold that FDF variances for toxic pollutant discharges are forbidden by the Act."¹¹⁰

On November 15, 1983, in response to the Third Circuit's decision in *Metal Finishers*, EPA Administrator William Ruckelshaus proposed that section 301(l) of the Act be amended so as to authorize FDF variances for toxic pollutants.¹¹¹ The Administrator claimed the variance was "essential" to the rulemaking process because it enabled the EPA to focus its data-gathering and analysis on more traditional facilities, and to avoid the need for extensive subcategorization.¹¹² Ruckelshaus also argued that the FDF vari-

tions of BAT limitations and FDF variances of BPT limitations as ad hoc determinations of the applicable technology-based effluent limitations which reflected the same economic and technological commitment as the limitation generally applicable to the class. *Id.*

107. 719 F.2d at 646.

108. *Id.*

109. *Id.* (citing *Appalachian II*, 620 F.2d at 1046-48). For a discussion of the Fourth Circuit's interpretation of § 301(l) as unclear, see note 100 and accompanying text *supra*. The Third Circuit stated: "Because we find that section 301(l) is clear, we must disagree. Section 301(l) forbids modifications, and FDF variances are no less modifications than those provisions indisputably prohibited by that section." 719 F.2d at 646.

110. 719 F.2d at 646.

111. See [Current Developments] ENV'T REP. (BNA) 1307, 1307 (November 18, 1983). Administrator Ruckelshaus presented the Administration's proposals for amending the Clean Water Act to the House Public Works and Transportation Subcommittee on Water Resources. *Id.* This proposed amendment reads as follows:

(1) The Administrator may not modify any requirement of this section as it applies to any specific pollutant which is on the toxic pollutant list under section 307(a)(1) of this Act, *except that the Administrator may modify such a requirement to the extent justified by the fact that a direct or indirect discharger is, in terms of the factors specified in Section 304(b), fundamentally different from the direct and indirect dischargers considered in developing applicable effluent limitations guidelines and pretreatment standards under this section and section 307(b).*

Id. at 1355 (emphasis added to indicate proposed amendment; cf. 33 U.S.C. § 1311(l) (1982) (present version of § 301(l))).

112. See [Current Developments] ENV'T REP. (BNA) at 1307. The Administrator concluded:

The alternative to allowing the variance is to develop a separate subcategory within the regulation for a facility affected by different factors from those considered for the broader category.

"The subcategorization approach will add further complications and require potentially substantial additional time in developing what are al-

ances would reduce the legal vulnerability of the rules by acting as an administrative safety valve.¹¹³

On December 19, 1983, one of the *Metal Finishers* intervenors requested that the United States Supreme Court grant certiorari and reverse the Third Circuit's decision that FDF variances may not be applied to toxic pollutants.¹¹⁴ On February 17, 1984, the EPA petitioned the Court to grant certiorari and reverse the Third Circuit on the same issue.¹¹⁵ The Supreme Court granted certiorari in both cases.¹¹⁶

III. THE IMPROPRIETY OF FDF VARIANCES FOR TOXIC POLLUTANTS

It is submitted that allowing FDF variances for toxic pollution limitations under the FWPCA is contrary to the text of the Act, Congressional intent, and sound policy, for a variety of reasons. As the Third Circuit case of *National Association of Metal Finishers v. EPA*¹¹⁷ succinctly pointed out,

ready extraordinarily complex and detailed regulations," Ruckelshaus testified.

Id.

113. *Id.* Ruckelshaus argued that the amendment is necessary because "the procedure reduces the legal vulnerability of the national standards by allowing an administrative remedy for facilities that cannot meet the standards because of factors not considered in the rulemaking." *Id.* For a discussion of the validity of the "safety valve" argument for allowing variances, see note 133 and accompanying text *infra*. For a discussion of the advantages of increased efficiency gained by the EPA in allowing variances, see notes 134-37 and accompanying text *infra*.

114. *National Ass'n. of Metal Finishers v. EPA*, 719 F.2d 624 (3d Cir. 1983), *cert. granted sub nom.* *Chemical Mfrs. Ass'n v. Natural Resources Defense Council, Inc.*, 104 S. Ct. 2167 (1984). The questions presented in the petition for certiorari by the Chemical Manufacturers Association are as follows:

(1) Is court of appeals' decision contrary to this Court's holding in *E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112 (1977), that effluent limitations may be "set by regulation, so long as some allowance is made for variations in individual plants, as EPA has done by including a variance clause" in its regulations? (2) Was court below incorrect in ruling that § 301(l) of Clean Water Act precludes granting of variance for toxic pollutants to atypical plants that can demonstrate factors not considered by EPA in establishing national technology-based regulations? (3) Is decision below, by removing EPA's discretion to deal with atypical situations either by individual orders or by rulemaking, contrary to this Court's decision in *SEC v. Chenery Corp.*, 332 U.S. 194 (1947)?

52 U.S.L.W. 3787, 3787 (U.S. May 1, 1984) (Nos. 83-1013). *See SEC v. Chenery Corp.*, 332 U.S. 194 (1947) (where the facts are undisputed the court may disturb the conclusion of an administrative agency only when it lacks any rational and statutory foundation). For a discussion of *Du Pont*, see notes 80-81 and accompanying text *supra*. For a discussion of the factors relevant in an FDF determination, see notes 85-89 and accompanying text *supra*.

115. 52 U.S.L.W. 3726 (U.S. April 3, 1984) (No. 83-1399), *cert. granted*, 52 U.S.L.W. 3787 (U.S. May 1, 1984) (Nos. 83-1373). The question presented by the EPA in the petition is whether § 301(l) bars the EPA from granting FDF variances for toxic pollutants.

116. 52 U.S.L.W. 3787 (U.S. May 1, 1984) (Nos. 83-1013, 83-1373).

117. 719 F.2d 624 (3d Cir. 1983). For a discussion of *Metal Finishers*, see notes 102-10 and accompanying text *supra*.

neither the text nor the legislative history of the Act authorizes variances for toxic pollutants.¹¹⁸ The *Metal Finishers* court correctly followed *National Crushed Stone*¹¹⁹ in recognizing that a section 301(c) "modification" performs the same function for BAT as the FDF "variance" performs for BPT.¹²⁰ Given that the Supreme Court had already determined that section 301(c) modifications and FDF variances perform the same function, the conclusion seems inescapable that Congress intended the words of section 301(l) to preclude both in the case of toxic limitations.¹²¹ The Fourth Circuit's contrary holding in *Appalachian Power II*¹²² is not only distinguishable,¹²³ but probably discredited by the Supreme Court's decision in *National Crushed Stone*.¹²⁴

Strong policy reasons for regulating toxic pollutants also militate against adoption of the proposed amendment authorizing FDF variances for toxic pollutant limitations.¹²⁵ Toxic pollutants, even more than other pollutants, are regulated because of their potential and actual detrimental effects on man and other living organisms.¹²⁶ Toxic pollutants are now regulated primarily with technology-based limitations, because experience has shown that health-based limitations are very difficult to formulate.¹²⁷ Congress'

118. See 33 U.S.C. § 1311(g) (1982) (environmental variances specifically do not apply to toxic pollutants); *id.* § 1311(c) (using "modification" language found in § 301(l) prohibition).

119. 449 U.S. 64 (1980). For a discussion of *National Crushed Stone*, see notes 82-83 & 85-88 and accompanying text *supra*.

120. 719 F.2d at 646 (citing *National Crushed Stone*, 449 U.S. at 79 n.18 (EPA explanation that variances allow "individualized definition[s]" of the limitations)). Both variance/modifications create ad hoc technology-based effluent standards, as the Third Circuit recognized.

121. See 719 F.2d at 646. The Third Circuit properly employed this reasoning in rejecting EPA's claim that "modification" under § 301(l) was a term of art which did not include FDF variances. *Id.* For further discussion of this argument, see notes 103-04 *supra*.

122. 620 F.2d 1040 (4th Cir. 1980). For a discussion of *Appalachian II*, see notes 95-101 and accompanying text *supra*.

123. See 620 F.2d at 1047. The Fourth Circuit's decision in *Appalachian II* can be interpreted strictly as prohibiting only retrospective application of § 301(l)'s ban on modification of toxic BPT limitations. See *id.* For a discussion of *Appalachian II*, see notes 95-101 and accompanying text *supra*.

124. See *EPA v. National Crushed Stone Ass'n.*, 449 U.S. 64, 72 (1980) (rejecting *Appalachian II*'s holding that individual sources' economic ability to comply should be considered in FDF variance determinations). For a discussion of the economic ability to comply issue in the context of BPT and BAT, see notes 35 & 37 and accompanying text *supra*. See also *Appalachian Power Co. v. Train*, 671 F.2d 801 (4th Cir. 1982) (*Appalachian III*) (following *National Crushed Stone*).

125. See *Metal Finishers*, 719 F.2d at 645 ("the elimination of the discharge as toxic pollutants has always received special emphasis under the Act.") (citing 33 U.S.C. §§ 1251(a)(3), 1362(13) (1982)).

126. See 33 U.S.C. § 1362(13) (1982). Toxic pollutants are defined by the likelihood of their causing "death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations. . . ." *Id.* For the full definition of "toxic pollutant," see note 47 *supra*.

127. For a discussion of the difficulty EPA had in formulating health-based lim-

change from a health to technology focus advanced the cause of workable pollution control.¹²⁸ However, allowing FDF variances from those technology limitations is inconsistent with the underlying health concerns and a step away from toxic pollution control.¹²⁹ The section 301(*l*) prohibition shows a strong congressional intent to deal specifically with toxic pollutants in an uncompromising manner.¹³⁰ Administrator Ruckelshaus' proposed amendment evidences the EPA's belief that section 301(*l*) is presently a bar to FDF variances for toxic pollutants.¹³¹

One argument used by proponents of variances in regulations, and reiterated by Administrator Ruckelshaus in urging approval of the proposed authorization of FDF variances for toxic pollutants, is the "safety valve" argument.¹³² This argument states that a regulation is less vulnerable to legal attack and declarations of invalidity if it contains an administrative remedy for facilities which contain factors not considered in the rulemaking process.¹³³

itations, see Hall, *supra* note 47, at 613-16 (background of the "Flannery settlement"). The difficulty EPA had in promulgating the health-based limitations is illustrated by the "Flannery settlement," which forced EPA to regulate toxic pollutants through technological limitations. *Id.* For further discussion of the "Flannery settlement", see note 47 *supra*. For an in-depth discussion of the practical problems in formulating health-based standards, see La Pierre, *supra* note 30, at 799-805.

128. See Cairnes, *supra* note 4, at 4 (technology-based standards were applied to toxic pollutants "based on the assumption that the 'practical approach' was the best way to abate pollution"). Cairnes goes on to point out, however, that technology-based standards do not consider several important scientific principles which may determine how a discharge of toxic pollutants affects the environment. *Id.* at 5.

129. See 33 U.S.C. § 1251(a)(3) (1982) ("it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited"). This policy indicates that the need to control toxic discharges should outweigh the desirability of regulations which accommodate the particular needs of individual polluters. *Cf. id.* § 1311(*l*) (prohibiting modifications of limitations on toxic pollutants).

130. *Id.* § 1311(*l*). For the text of § 301(*l*), see note 75 *supra*. The Act specifically directs the Administrator to promulgate BAT-based effluent limitations for toxic pollutants. 33 U.S.C. § 1311(b)(2)(c) (1982). There was litigation over whether the Act even allowed the Administrator to promulgate BPT-based effluent limitations for conventional pollutants. See *Du Pont*, 430 U.S. at 128 (the Administrator may promulgate single-number BPT effluent limitations as long as there is some provision for a variance).

131. For the text of the proposed change to § 301(*l*), see note 111 *supra*.

132. For a discussion of Administrator Ruckelshaus' arguments in favor of authorization for FDF variances for toxic pollutants, see notes 112-13 *supra*.

133. See *National Resources Defense Council v. EPA*, 537 F.2d 642 (2d Cir. 1976). The Second Circuit stated that a "limited safety valve permits a more rigorous adherence to an effective regulation." *Id.* at 647 (quoting *Portland Cement Ass'n. v. Ruckelshaus*, 486 F.2d 375, 399 (D.C. Cir. 1973), *cert denied*, 417 U.S. 921 (1974)). An effluent limitation with the possibility of a variance is less likely to be challenged in court because: (1) dischargers may apply for variances instead of challenging the limit, in the process possibly using up all of the limited 90 day period of review under § 509(b)(1); and (2) dischargers which challenge an effluent limitation might be less likely to win if they did not attempt to take advantage of the variance or were denied a variance. See *id.*

This "safety valve" argument is weakened by the fact that challenges to effluent

A stronger argument in support of allowing variances for toxic pollution standards is one of agency efficiency.¹³⁴ If the EPA can concentrate on the "typical" discharger it can presumably set technology based limitations more quickly and easily.¹³⁵ Such concerns of administrative efficiency must be balanced against the flexibility available in subcategorization¹³⁶ and the policy reasons favoring strict toxic standards.¹³⁷

Neither of these arguments carries much weight, because whatever is true of variances from effluent limitations in general¹³⁸ and administrative efficiency in general is irrelevant to a discussion of variances for toxic pollutants. Congress has clearly demonstrated that it intends to deal specifically and strictly with toxic pollutants.¹³⁹

FDF variance provisions should not be used to relieve EPA of its obligation to conduct investigations and propose a reasonable regulation that is fair to the category in general.¹⁴⁰ Since strong policy reasons favor general

limitations are already limited by the preclusive effect of § 509(b)(2). 33 U.S.C. § 1369(b)(2) (1982). For a discussion of judicial review of EPA action under § 509, see note 52 and accompanying text *supra*.

Many effluent limitations that have been challenged in the courts have been found invalid. See La Pierre, *supra* note 30, at 818 (listing the number of challenges and the number of remands to the EPA for repromulgation of effluent limits).

134. For a description of Administrator Ruckelshaus' position that allowing FDF variances for toxics will be more efficient, see note 112 *supra*.

135. [Current Developments] ENV'T. REP. (BNA) 1307 (Nov. 18, 1983).

136. See, e.g., *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1053 (D.C. Cir. 1978) (within the pulp and paper industry there were "16 subcategories, divided into 66 subcategories" approximately "one set of limitations to every five mills"). It would seem that much of the extensive subcategorization that has already been done for non-toxic effluent limitations will be applicable to toxic effluent limitations. For a discussion of the extensive subcategorization already in place, see note 50 *supra*. For a discussion of subcategorization as a desirable alternative to variances, see note 140 *infra*.

137. See 33 U.S.C. § 1251(a)(3) (1982) ("it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited"). The purpose behind almost all environmental regulation, the protection of human health and the environment, is most urgent in the area of toxic pollution control. See *id.* § 1362(13) (defining "toxic pollutant"). See also Cairnes, *supra* note 4, at 2. For the full statutory definition of "toxic pollutant," see note 47 *supra*. Congress realized the danger caused by toxic pollutants and expressed its concern in the 1977 amendments. See LEGISLATIVE HISTORY 1977, *supra* note 40, at 455 ("discharge of toxic pollutants should be eliminated as soon as possible"); F. GRAD, *supra* note 28, § 3.03[4][g], at 3-171 ("As amended in 1977, the [Act] places considerably greater emphasis on the regulation of toxic pollutants. . ."). For a discussion of the regulation of toxic pollutants prior to and after the 1977 amendments, see notes 47-49 and accompanying text *supra*.

138. See *Du Pont*, 430 U.S. at 128 (stating that the Administrator can promulgate BPT-based effluent limitations as long as he includes some provision for variance).

139. For a discussion of the regulation of toxic pollutants under the Act, see notes 47-49 and accompanying text *supra*.

140. See 33 U.S.C. § 1311(b)(2)(A) (1982) (imposing obligation to impose BAT-based effluent limitations on categories and classes of point sources). The evidence used to obtain an FDF variance may also be inherently biased since it is presented by the discharger seeking the variance, while an effluent standard set by the EPA is

and nationwide categorical control of toxics,¹⁴¹ categorical shortcomings must be expected and tolerated.¹⁴²

IV. CONCLUSION

The drafters of the Clean Water Act realized that cleaning our nation's waterways would not come without a price. Some industries were expected to close because of the cost of pollution control. The drafters also realized that toxic pollution, by definition, seriously endangers living organisms.¹⁴³ This commentator asserts that the cost to industry of BAT pollution control for toxic pollutants is worth the benefits of decreased toxic pollution in our nation's waterways. The best available technology standard should not be compromised by statutory or administrative variance procedures in the context of toxic pollutants.¹⁴⁴ In *Metal Finishers*, the Third Circuit properly established the priority of health over administrative ease and industrial expense.¹⁴⁵ This priority should be maintained and FDF variances should not be allowed for toxic pollutant limitations.

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based on EPA gathered information. *See id.* (BAT-based effluent limitations to be based on § 304 guidelines promulgated by the Administrator). It is suggested that there will be less incentive for EPA to conduct in-depth investigations as to the proper effluent limitation for a particular category of sources if they can merely promulgate a broad, technically inadequate regulation and wait for the dischargers to bring the information to them. *See id.* *See also* Baum, *supra* note 56, at 76, 95 (pointing out that the EPA's desire to strive for administrative efficiency often overrides environmental objectives); Cairnes, *supra* note 4, at 2 (pointing out that even now "the scientific underpinnings for almost all regulatory objectives are inadequate").

141. *See* 33 U.S.C. § 1362(13) (1982) (defining "toxic pollutant"). Toxic pollutants do not become less toxic because they are discharged by a source which does not fit precisely within a specific category. *See id.*

142. *See* LEGISLATIVE HISTORY 1972, *supra* note 2, at 128 (recognizing that some dischargers will be forced to close because of the regulations under the FWPCA).

143. For a discussion of the statutory policy for the regulation of toxic pollutants, *see* note 28 and accompanying text *supra*.

144. For a discussion of BAT-based effluent limitations for toxic pollutants, *see* note 48 and accompanying text *supra*.

145. *See* National Ass'n. of Metal Finishers v. EPA, 719 F.2d 624 (3d Cir. 1983), *cert granted sub nom.* Chemical Mfrs. Ass'n. v. Natural Resources Defense Council, Inc., 104 S. Ct. 2167 (1984).